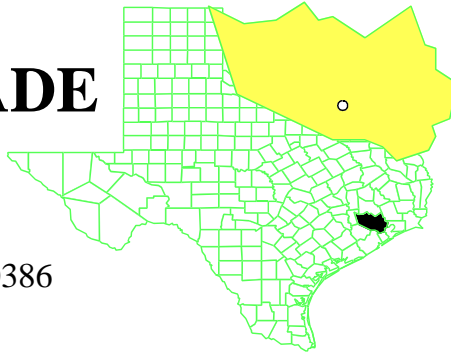


SOUTH CAVALCADE STREET TEXAS

EPA ID# TXD980810386

Site ID: 0602895



**EPA REGION 6
CONGRESSIONAL DISTRICT 18**
Harris County

Updated: April 28, 2005
Next Update: September 2005

Site Description

- Location:**
- The site is located at the southeast intersection of Cavalcade & Maury Streets, about two miles southwest of the intersection of Loop 610 North & U.S. 59., Houston, Harris County, Texas.
- Population:**
- Approximately 4,500 people live within a one-mile radius of the site.
- Setting:**
- The nearest residence to this site is 200 feet to the west, and the nearest water well is about 1,500 feet from site. However, the aquifers to be remediated are not being used as water supplies, nor are they likely to be used because there are available water sources in the area.
 - This 66-acre site was used as a wood treating facility from 1910 to 1962.
 - All original facilities were removed about 1962, and the site was covered with 1-2 feet of fill material.
 - Two-thirds of the site were developed by three palletized trucking firms with large warehouses; the center third of the property is vacant.
- Hydrogeology:**
- The subsurface consists of interbedded clays, silts and sands of the Beaumont formation.

Current Site Strategy

- The objective of this site cleanup is to protect human health and the environment by controlling the migration of shallow groundwater contaminants so as to reduce and/or eliminate the potential of contaminating deeper aquifers, and if possible restore the shallow groundwater to a potential future beneficial use. In addition, contaminated surface soils have been capped with reinforced concrete to prevent inadvertent dermal contact and ingestion. Construction of the concrete cap construction began November 1999 and was completed July 2000. Beazer East, the responsible party (RP), is presently removing creosote from the shallow aquifer and conducting studies to determine how to best control contaminant migration.

Wastes and Volumes

- The principal pollutants at the site include creosote and wood treating metal salts.
- Both soils & ground water are contaminated with creosote-related compounds.
- The volume of contaminated soils at the site is approximately 7,000 cubic yards, now contained beneath a cap.

Site Assessment and Ranking

NPL LISTING HISTORY

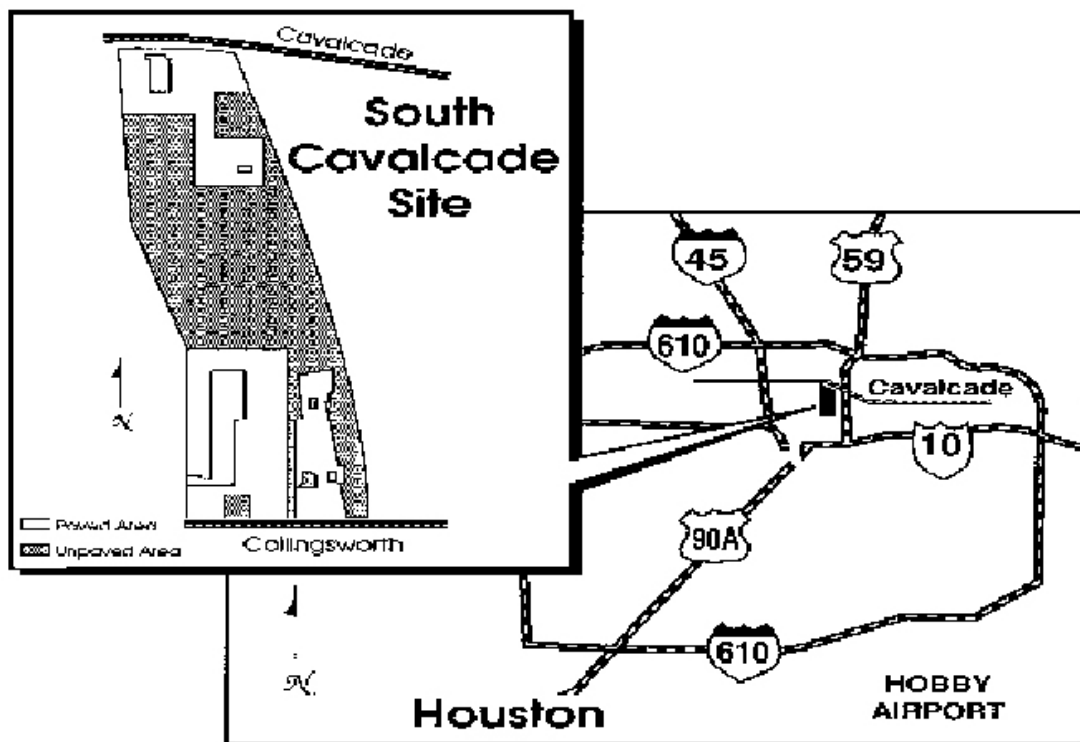
Site HRS Score: 38.69

Proposed Date: 10/5/84

Final Date: 6/10/86

NPL Update: No. 2

Site Map and Diagram



The Remediation Process

- Site History

- Wood treatment facility operated by National Lumber and Creosoting Company began operation in 1910 and continued until 1938.
- Koppers Co., Inc., now Beazer East, Inc., purchased the facility in 1938 and continued wood treating operations and opened a coal tar distillation facility.
- Operations ceased in 1962, and the site was cleared and sold in 1962.
- Presently, three trucking firms operate warehouse and terminal operations at the site: Palletized Trucking, Trucking Properties and Nations Way.
- The Remedial Investigation and Feasibility Study (RI/FS) for this site was completed in September 1988, conducted by the potentially responsible parties (PRPs) under EPA oversight.
- The Remedial Design (RD) for this site was completed in January 1995. Construction for the ground water collection and DNAPL recovery system was initiated in June 1995. Start-up of the ground water collection and DNAPL recovery components of the ground water remedy was conducted in September 1995, following completion of the ground water treatment plant modifications.
- The soil remedy was changed from soil washing to a reinforced concrete cap in June 1997.
- Beazer and EPA negotiated a change to the consent decree for the soil remedy in 1998.
- In November 1999, Beazer began construction of the concrete caps over the contaminated surface soil at two separate areas on-site. The construction of the cap was completed July 2000.
- The Preliminary Closeout Report was approved by EPA Region 6 on September 15, 2000, establishing construction completion for the Site, for both the ground water and soils.

- Health Considerations:

- Primary risks from the site stem from the carcinogenic polycyclic aromatic hydrocarbons (cPAHs) found in the creosote. These compounds are in the soil and ground water.

Record of Decision

Signed: September 26, 1988
Amended June 27, 1997

This remedy will protect humans from unhealthy exposures to contaminated soil and ground water.

- Ground Water:

- The 1988 Record of Decision (ROD) called for ground water remediation using physical/chemical separation of contaminants, followed by filtration and activated carbon adsorption to remove all particulates and organic compounds.

- Soil:
 - The remedy was amended in June 1997. The original remedy was soil washing and soil flushing; however full scale work in the field determine these remedies were not effective. The amended remedy selected a cap, which was constructed with reinforced concrete to provide for continued use of the contaminated soil area for tractor trailer parking.

<u>Other Remedies Considered</u>	<u>Reason Not Chosen</u>
1. "No Action"	Does not meet remedial objectives
2. Soil washing and flushing	Remedy failed in field testing
3. Offsite landfill	Not as effective as selected remedy
4. On-site incineration	Difficult to implement, not accepted by community
5. In Situ bioremediation	Not as effective as selected remedy
6. Offsite incineration	Cost effectiveness
7. In Situ biotreatment of ground water	Not as effective as selected remedy
8. Carbon adsorption, air stripping	Implementation problems
9. Aerated tank treatment-ground water	Cost effectiveness

- The Remedial Design (RD) began in 7/90 and was completed 1/95.
- The Remedial Action (RA), construction of the site remedy, began in the summer of 1995.
- An amendment to the ROD was proposed on 2/9/97. This amendment proposed changing the soil remedy from soil washing / flushing to capping all contaminated soils with concrete.
- Start-up of the ground water treatment and collection system was conducted in 9/95. Construction of the caps were completed in 7/00/.
- The Preliminary Closeout Report was approved by EPA Region 6 on 9/15/00, establishing construction completion for the Site, for both the ground water and soils.

Enforcement _____

- Consent Decree for RD/RA signed by EPA and Beazer East on 3/14/91.

Community Involvement _____

- Community Involvement Plan: Developed 3/85, revised 2/89 and again 7/91.
- Open houses and workshops: 9/85, 4/92, 1/93
- Proposed Plan Fact Sheet and Public Meeting: 8/88
- ROD Fact Sheet: 10/88
- Consent Decree Fact Sheet: 9/90
- Remedial Design Fact Sheet: 5/91
- Remedial Design Progress Fact Sheet: 3/91
- Superfund Site Update - Remedial Design Completed 3/95
- Milestone Fact Sheets: 4/87, 7/87, 9/90, 5/91, 4/92
- Citizens on site mailing list: 56
- Constituency Interest: Low - no specific concerns, just desire for the site to be cleaned up.
- Public meeting for proposed ROD amendment held 2/20/97
- Notice of Five-Year Review published in the Houston Chronicle zone newspaper 8/08/02 and mailed to citizens on the site mailing list.
- First Five-Year Review was signed 9/25/02
- Site Repository:
 - Houston Central Library, Government Documents Area, 500 McKinney Street, Houston, TX 77002

Technical Assistance Grant

- Availability Notice: 4/4/89 Re-advertised 9/90 (mailing)
- Letters of Intent Received:
 - 1) LIFT Endowment Fund, Inc. - 2/8/90 (withdrawn)
 - Final Application Received: N. & S. Cavalcade St. Group 12/93 and 9/94.
 - Grant Award: Applications denied.
- Current Status: No TAG

Contacts

- **Remedial Project Manager (EPA):** Camille Hueni, 214-665-2231, Mail Code: 6SF-AP; E-mail: hueni.camille@epa.gov
- **State Contact (TCEQ):** Carol Dye, 512-239-1504, Mail Code 143; E-mail: cdye@tceq.state.tx.us
- **Community Involvement (EPA):** Phyllis (June) Hoey, 214-665-2231, Mail Code: 6SF-8522; E-mail: hoey.phyllis@epa.gov
- **Attorney (EPA):** Gloria Moran, 214-665-3193; Mail Code: 6RC-S; E-mail: moran.gloria@epa.gov
- **State Coordinator (EPA):** Karen Bond 214-665-6682, Mail Code: 6SF-AP; E-mail: bond.karen@epa.gov
- **Regional Public Liaison:** Arnold Ondarza (303) 312-6777; E-mail: ondarza.arnold@epa.gov
- **Toll Free Number:** 1-800-533-3508

Current Status and Issues

- The DNAPL (dense non aqueous phase liquid) extraction system, in operation since 1996, has removed approximately 2800 gallons of product to date. Recovery of DNAPL has been ongoing in three Ground Water Remedial Action Areas.
- Because DNAPL is present, ground water cleanup goals may not be achievable. The RP initiated a study in 1996 to determine to what degree cleanup is feasible. The study indicated that monitored natural attenuation may be possible if the DNAPL is removed to the maximum extent possible. EPA gave Beazer approval to initiate work plan activities to gather additional data to support a monitored natural attenuation option. Beazer submitted that information as the *Groundwater Fate and Transport Evaluation Report*, which has supported subsequent discussions.
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- In November 1999, Beazer began placing a concrete cap on the contaminated surface soil at the site. The construction of the cap was completed July 2000.
- The Preliminary Closeout Report was approved by EPA Region 6 on September 15, 2000, establishing construction completion for the Site, for both the ground water and soils.
- The initial *Five-Year Review* was completed September 25, 2002. The Five-Year Review evaluated the effectiveness of both the soil and ground water remedies to correct contamination problems and to protect human health and the environment.

In summary, this first Five-Year Review for the South Cavalcade Street Site confirmed that the remedial actions implemented at the Site will remain protective of human health and the environment for soils, and are protective in the short-term for ground water. Institutional controls have been established at the Site to ensure that future use of the Site remains non-residential and to prohibit on-site ground water use. Current information shows that shallow ground water is not currently being used in the vicinity of the Site and the deeper ground water

has not been impacted by site-related constituents. The concrete cap eliminates any potential for direct contact with impacted soil; the long-term Operations and Maintenance (O&M) Plan further ensures that potential for future exposures to underlying soils are eliminated.

Also, the DNAPL recovery and ground water treatment systems are operating effectively to reduce the contaminant source over time. The ground water remedy can be considered protective for the short-term, however future protectiveness is uncertain due to the possibility of further off-site migration of the plume to the south and southwest and the absence of data to confirm whether or not migration is continuing. It is recommended that these uncertainties be further evaluated and any necessary actions taken to ensure future protectiveness as appropriate.

Copies of the *Five-Year Review* report are available to the public at the information repository at:

Houston Central Library
Government Documents area
500 McKinney Street
Houston, Texas 77002

- Beazer has submitted a *Supplemental Ground Water Characterization Workplan, April 2005*, for additional characterization in the shallow and intermediate aquifer to support further consideration of natural attenuation as part of a ground water remedy. The investigation will define preferential pathways for migration of impacted ground water from source areas at the site, further define extent of contamination off-site, and support development of a ground water monitoring network for both the shallow and intermediate aquifers. EPA and the Texas Commission on Environmental Quality (TCEQ) are currently reviewing the workplan; field work is tentatively scheduled for Mid-Summer 2005.

Schedule

● WASTELAN Data Base Schedule Milestones

- | | |
|--------------------------------|----------------|
| ○ Remedial Action | |
| - Preliminary Close Out Report | September 2000 |
| - Close Out Report | 2025 |
| ○ First Five-Year Review | September 2002 |
| ○ Second Five-Year Review | September 2007 |
| ○ NPL Deletion | 2026 |

Benefits

- The remedy will prevent off-site migration of contaminated groundwater, while allowing continued commercial use of the property.